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Proposed Maximum Residue Limit PMRL2016-04

Buprofezin

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has received applications to register technical grade buprofezin and the end-use product Applaud Insect Growth Regulator for use in Canada on tomatoes, cucumbers, and peppers in greenhouse.

The evaluation of these buprofezin applications indicated that the end-use product has value, and the human health and environmental risks associated with their proposed uses are acceptable. Details regarding these applications can be found in Proposed Registration Decision PRD2016-07, *Buprofezin*, posted to the Health Canada website on 2 March 2016.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally specified as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

In addition, the PMRA is proposing to specify MRLs for buprofezin on various commodities to permit the import and sale of food containing such residues. The PMRA has determined the quantity of residues that are likely to remain in or on the imported commodities when buprofezin is used according to label directions in the exporting country, and that such residues will not be a concern to human health. Details regarding the proposed MRLs on imported commodities can also be found in PRD2016-07.

Consultation on the proposed MRLs for buprofezin is being conducted via PRD2016-07. Information regarding the proposed MRLs can be found in Sections 3.5 and 7.1. Supporting field trial residue data are provided in Appendix I, Table 4. The PMRA invites the public to submit written comments on the proposed MRLs for buprofezin in accordance with the guidance found in PRD2016-07.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by Canada's Notification Authority and Enquiry Point.

The proposed MRLs for buprofezin are as follows.

Table 1 Proposed Maximum Residue Limits for Buprofezin

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
Buprofezin	2-[(1,1-dimethylethyl)imino]tetrahydro-3-(1-methylethyl)-5-phenyl-4*H*-1, 3, 5-thiadiazin-4-one	80	Citrus oil
		60	Leafy *Brassica* greens subgroup (Crop Subgroup 5B)
		35	Leafy Vegetables except *Brassica* vegetables (Crop Group 4)
		30	Tea (dried leaves)
		12	Head and Stem *Brassica* vegetables subgroup (Crop Subgroup 5A)
		9.0	Peach subgroup (Crop Subgroup 12-09B)
		6.0	Pears, Asian pears
		5.0	Olives
		4.0	Orange subgroup (Crop Subgroup 10A)
		3.0	Low growing berry subgroup (Crop Subgroup 13-07G), apples, crabapples, loquats, mayhaws, quinces
		2.0	Fruiting Vegetables (Crop Group 8-09), Cherry subgroup (Crop Subgroup 12-09A), Plum subgroup (Crop Subgroup 12-09C), raisins
		1.0	Grapes
		0.9	Papayas, star apples, black sapotes, mangos, sapodillas, canistels, mamey sapotes
		0.7	Cucurbit Vegetables (Crop Group 9)
		0.35	Green coffee beans, undelinted cotton seeds

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
		0.3	Lychees, avocados, bananas, sugar apples, cherimoyas, atemoyas, custard apples, ilamas, soursops, biribas, longans, Spanish limes, rambutans, pulasans, guavas, feijoas, jaboticabas, wax jambus, starfruits, passionfruits, acerolas
		0.05	Tree Nuts (Crop Group 14-11)
		0.02	Edible-podded snap beans

[1] ppm = parts per million

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for buprofezin in Canada with corresponding American tolerances and Codex MRLs.[1] American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs (where different)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Orange subgroup (CSG 10A)	4.0	2.5 (CG 10)	1.0 (citrus fruits)
Grapes	1.0	2.5	1.0
Raisins	2.0	Not Established	Not Established
Leafy Vegetables except *Brassica* Vegetables (CG4)	35	6.0 (head lettuce and radicchio)	Not Established
Tea	30	20	30 (Tea, green)

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for buprofezin up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.